

WHAT IS CLAIMED IS:

1. A drive method of a CCD color image sensor, comprising the steps of:

transferring signal charges in a photoelectric conversion  
5 element group of each color to a shift register by opening a shift gate of each color after transferring unnecessary charges in the photoelectric conversion element group of each color in the shift register;

during the time period of transferring the signal charges  
10 in the photoelectric conversion element group of each color in the shift register, shutting the shift gate of each color and accumulating unnecessary charges in the photoelectric conversion element group of each color;

opening the shift gate of each color and transferring  
15 the unnecessary charges occurring in the photoelectric conversion element group of each color to the shift register;  
and

sequentially shutting the shift gates of colors and  
continuing to shut each of the shift gates in response to the  
20 time period set for each color, thereby accumulating the signal charges in the photoelectric conversion element group of each color.

2. A drive method of a CCD color image sensor, comprising  
25 the steps of:

transferring unnecessary charges occurring in a photoelectric conversion element group of each color in a shift register in a time period of accumulating signal charges in the photoelectric conversion element group of each color; and

5        transferring the signal charges accumulated in the photoelectric conversion element group of each color in response to a different time period for each color set in the photoelectric conversion element group of each color in the shift register in the time period of accumulating the unnecessary charges in  
10    the photoelectric conversion element group of each color.

3.    A color image input apparatus comprising:

      a CCD color image sensor including a photoelectric conversion element group of each color, a shift gate of each  
15    color, and a shift register of each color;

      means for transferring signal charges in the photoelectric conversion element group of each color to the shift register by opening the shift gate of each color after transferring unnecessary charges in the photoelectric  
20    conversion element group of each color to the shift register;

      means for, during the time period of transferring the signal charges in the photoelectric conversion element group of each color to the shift register, shutting the shift gate of each color and accumulating unnecessary charges in the  
25    photoelectric conversion element group of each color;

means for opening the shift gate of each color and transferring the unnecessary charges occurring in the photoelectric conversion element group of each color to the shift register; and

5 means for shutting the shift gates of colors in order and continuing to shut each of the shift gates in response to the time period set for each color, thereby accumulating the signal charges in the photoelectric conversion element group of each color.

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4. A color image input apparatus comprising:

a CCD color image sensor including a photoelectric conversion element group of each color and a shift register of each color;

15 means for transferring unnecessary charges occurring in a photoelectric conversion element group of each color in a shift register in a time period of accumulating signal charges in the photoelectric conversion element group of each color; and

20 means for transferring the signal charges accumulated in the photoelectric conversion element group of each color in response to a different time period for each color set in the photoelectric conversion element group of each color in the shift register in the time period of accumulating the  
25 unnecessary charges in the photoelectric conversion element

group of each color.